

Evaluation of Danta Bhagya Yojane: A Flagship Programme of Government of Karnataka

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Abstract: **Introduction:** Program evaluation offers a systematic approach to examine health promotion initiative and guides to understand the impact a program has on the target population it serves. It is crucial that evaluation produces the information needed to improve the effectiveness of health promotion efforts to keep the program sustainable. **Objective:** The purpose of this study is aimed to evaluate the process and the outcome in term of effectiveness of Danta Bhagya Yojane. **Methodology:** A mixed method approach involving qualitative and quantitative method was employed based on a concurrent triangulation design. Data was collected via interviews, questionnaires, records and field notes. Evidence was triangulated to evaluate the programme. **Results:** An overall improvement in OHRQoL among the beneficiaries was observed. The data collected from Dental institutions and government office indicated minimum coverage of beneficiaries under this scheme. The Qualitative study revealed that scheme has affected by the shortage of resources lack of awareness about the scheme, delay in payments to ASHA workers and difficulty in transportation and mobility of older adults. **Conclusion:** The Danta Bhagya Scheme has a huge potential to improve the oral health related quality of life of older adults specially who belongs to the lower socio-economic status and are underserved. The findings suggested there is a need to implement and support strategies that are known to increase the awareness and motivation about the scheme. It is recommended that all the stakeholder should join hand to make this scheme more sustainable and take it to the next level.

Key Words- denture, evaluation, , programme, qualitative

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I. Introduction

Edentulism is the state of having lost all of one's natural teeth. ^[1] Tooth loss is the dental equivalent of mortality. Monitoring the occurrence of an oral 'end state' such as edentulism is important because it is an indicator of both population health and functioning and adequacy of a country's oral health care system. ^[2] Edentulism is shown to increase with age.

The proportion of older people is rising tremendously when compared to the other age groups. Approximately 600 million people in the world are aged 60 years and above, and this number will double by the year 2025. ^[3] This number will rise to 2 billion by the year 2050, with almost 80% living in the developing countries. The geriatric population which comprises 7.7% of the total population suggests that India is in a phase of demographic transition. Today about 8.5% of population worldwide are aged 65 and above. ^[4] In India elderly population constitutes 8.2% of total population. This population of dental patient has different treatment needs than younger patient.

Keeping this in mind the Karnataka State Government has decided to provide free dentures to the senior citizens with complete tooth loss (aged 60 or above) belonging to the below poverty line families. The scheme is aimed at providing free dentures to at least 30,000 senior citizens. The State Government has involved 45 government and private dental colleges in the State to implement the Danta Bhagya scheme. The ASHA workers have been given the responsibility of identifying the needy senior citizens and linking them with the dental colleges for getting free dentures.

The overall quality of decision making can be improved through a more structured approach to understand the impact of programs. Program evaluation provides a structured approach to examine health promotion initiative and produces the information needed to improve the effectiveness of health promotion efforts. Till date there is no evaluation done for Danta Bhagya Yojane, so our aim is to evaluate the process and the outcome in term of effectiveness of Danta Bhagya Yojane in order to inform further development and service provision.

II. Material And Methods

In our study the qualitative and quantitative approaches are used to gain the richness and depth required to understand the mechanism and context in which the scheme is established.

Participant recruitment

Ethical approval for this study was granted by the Institutional Review Board and organizational consent was obtained from the Principal/Dean of Dental Institutions. Individual consent of the participants was obtained.

Questionnaire and Interview

The study was conducted in 12 Dental Institutions of Bangalore. Convenience sampling method was used and the Nodal officers from Dental Institutions of Bangalore were selected. An 8 item open ended questionnaire was prepared and to ensure content validity, the draft questionnaire was assessed by a panel of five experts made up of staff members from the department of public health dentistry. This questionnaire was administered to conduct an in-depth interview which was lasted for 30 minutes to discuss their experiences and perspectives of the programme. The statistics available at institutional level was obtained from the records. An in-depth interview was carried with the oral health policy coordinator and 12 ASHA workers which were selected by means of snow ball sampling method. The insight regarding the programme implementation and role integration was obtained with the help of an open ended questionnaire.

To evaluate the outcome 120 Beneficiaries of Danta Bhagya Yojane from the Dental Institutions of Bangalore were randomly selected and recruited for the study; the oral health related quality of life was assessed using Oral Health Impact Profile-14 (OHIP-14) questionnaire given by Slade GD.^[5] In order to assist the participant questionnaires were administered by conducting telephonic interviews with trained interviewers, only the participants using the denture for a period of 1 year were included in the study. The questionnaire contains 7 domains, for each items the elderly were asked how frequently they had experienced the impact in the preceding 12 months. Response items were recorded in a 5- point Likert scale: 0 = never, 1 = hardly ever, 2 = occasionally, 3 = fairly often, 4 = very often. Total OHIP-14 score ranged from 0 to 56. Higher scores indicate poor OHRQoL.

III. Statistical Analysis

The field notes recorded were the transcribed verbatim Inductive method was used to analyze the data, codes were obtained and themes were identified, the codes were then indexed under different themes. Quantitative data derived from the survey were analyzed in SPSS software version 24 and descriptive statistics were performed as appropriate.

IV. Result

The findings from the qualitative study have been organized according to the themes that emerged from the analysis.

Resources

Majority in the group think that the financial resources are not adequate to provide a quality denture and to arrange for the proper facilities for the patients as well as for the staffs. As one of the staff put it as:

"The cost was insufficient for the patient who require good quality dentures, material cost is fixed but the other things....has to be taken care by the institution"(M,F)

It has been seen that due to shortage of district labs as well lab technicians more time is needed to cover the target population which again limits the potential of this programme.

"We have man power deficiency in the form of lab technicians"(M)

Accessibility

Over the age of 60 years mobility of patients is the major issue. Most of them in the group think that transport of the patient and maintaining a follow up is difficult.

"There are no incentives for mobility of the patients to the hospitals...mobility of old patients is a difficult task"(M)

"For aged patient traveling is a problem"(M)

Awareness

ASHA workers have been directed to identify eligible people in their jurisdiction and bring them to the hospitals. This vital role of ASHA workers could not be utilized for several months as the software that lists the schemes for payment of incentives to them does not include Danta Bhagya.

"ASHA workers contribution is negative in getting the patients to our college"(M)

"Ground work by the ASHA workers is not proper"(M).

The lack of instruction and motivation regarding Danta Bhagya Yojane has been noticed among the ASHA workers.

" We didn't get any orders from the authorities" (M).

Information on the scheme and care available were considered important for older people. In promoting such services to older adults more traditional ways are useful like written information, physical advertisements having external signs, leaflets and advert in newspaper are important, however the most important is word of mouth.

"Spread of the programme with the words of mouth is essential"(M)

"Publicity is needed for the success; people need to know more about the programme"(F).

The information regarding the number of camps conducted, number of dentures delivered and number of cases referred by ASHA from May 2015 to August 2017 are presented [Table 1].

Table 1: Number of camps conducted, number of denture delivered and number of Patients referred by ASHA (May 2015-Aug 2017) among 12 Dental colleges of Bangalore.

Dental colleges	Number of camps conducted (May2015-Aug2017)	Number of denture delivered (May 2015-Aug 2017)	Number of patients referred by ASHA
Dental college 1	0	48	0
Dental college2	5	31	17
Dental college 3	3	70	10
Dental college 4	30	100	29
Dental college 5	2	79	8
Dental college 6	7	61	26
Dental college7	240	478	0
Dental college8	2	140	0
Dental college 9	15	520	0
Dental college10	15	505	50
Dental college11	3	248	11
Dental college 12	3	120	8

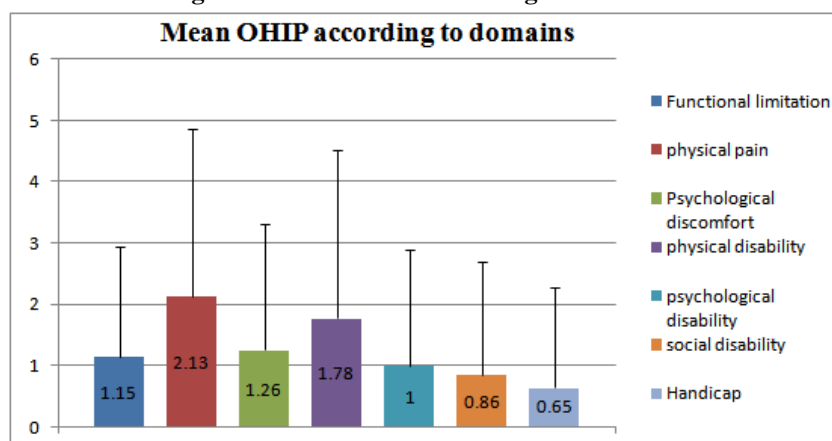
The demographic data obtained are tabulated in [Table 2]. The majority of them were male within age group 60-70. Most of the subjects (78.3%, $n = 120$) are between 60 and 70 years. Males constitute 63.3% ($n = 120$).

Table2: Age and Gender wise distribution of beneficiaries from Danta Bhagya Yojane

Variable	frequency	Percentage
Age group (years)		
60-70	94	78.4
70-80	26	21.6
Gender		
Male	74	61.6
Female	46	38.3

When the question was asked about impact of denture on different domains of OHIP-14, all the domains showed less impact on OHRQoL with least impact on the component belonging to handicap, social disability, psychological disability and functional limitation respectively [Figure 1].

Figure 1: Mean OHIP according to 7 domains



V. Discussion

In evaluation the triangulation design can be used to achieve validity.^[6] This approach involves collecting evidence from different sources and different ways and making conclusions based on the overall data collected. Triangulation allows us to validate and expand the results and helps to make robust conclusions and recommendations. It is generally agreed that, Qualitative research aims to produce rounded and contextual understandings on the basis of rich, nuanced and detailed data which involve understandings of complexity, detail and context through qualitative research methodology. It is possible to explore a wide array of dimensions, including people’s understandings and experiences and the way that social processes, institutions and relationships work.^[7] To complement this, quantitative data will also be ascertained in order to provide a broader overview of the scheme.

In this mixed method design different sources of data relating to the implementation of Danta Bhagya Yojane and qualitative data from interviews are combined for a comprehensive analysis. This multifaceted study design allows for examination of programme process including team collaboration and coordination, role integration and implementation; as well as analysis of health care and health status outcomes among the beneficiaries. The data obtained from the oral health policy office and the Dental Institutions suggested that the scheme despite of its potential, fails to cover the expected target population. The information also indicated less participation by ASHA suggesting few loopholes in the programme implementation strategies.

ASHA will be the first point of call for any health related demands, they are associated with various important health aspects and work for numerous Government health projects, therefore fatigue and lack of motivation could be considered as the possible reason of less activity by ASHA workers for Danta Bhagya Yojane. ASHA will be a health activist in the community who will create awareness on health and its social determinants. They mobilize the community towards local health planning, increased utilization and accountability of the existing health services. With the slight motivation and training they can be encouraged to spread the benefits of Danta Bhagya Yojane to the target population.

The colleges and management can play an active role to reach the needy population and supply the prompt quality treatment. They can contribute by active participation through enough manpower to serve the target population. Many participants in the study think that the allocated budget for complete denture is not sufficient to provide a denture with minimum quality so a well planned allocation of fund is required.

The assessment of OHRQoL among the beneficiaries who had been wearing the denture for the last one year suggested an overall improvement in OHRQoL. The findings of our study indicated that the beneficiaries had less impact on the component belonging to handicap, social disability, psychological pain and functional limitation which are in consistent with the S. Zainab et. al^[8] and Shimazaki et. al,^[9] where elderly people using full dentures had significantly less impact on daily functions, suggesting the potential of this programme to achieve its short as well as long term goals. However we fail to assess the OHRQoL among the beneficiaries before the use of denture which can be consider as one of the shortcoming of this study. This scheme consider the BPL card holder as the only potential target population although there are a group of needy older adults who are living in residential and rehabilitative centers. As they don’t have BPL cards so provision should be included in this scheme to make coverage of this forgotten population possible. This study provides an insight and recommendations at all levels of oral health care delivery to assess the success and challenges in the path of this scheme.

VI. Conclusion

The Danta Bhagya Scheme is one of its kind and has a huge potential to improve the oral health related quality of life of older adults specially who belongs to the lower socio-economic status and are underserved. The findings of this study indicate that there is a need to implement and support strategies that are known to increase the awareness and motivation about the scheme. A good scheme should aim to strike a balance between financial and non-financial incentive factors, so it is recommended that all the stakeholder should join hand to make this scheme more sustainable and take it to the next level.

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